

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising a single electrostatic latent image bearing member and a cyclic image forming unit group i) which is provided in a  
5 circular arrangement with a plurality of image forming units each having a replenishing developer cartridge containing a replenishing developer, and a developing assembly, and forming respective different-color toner images on the electrostatic latent image bearing member  
10 and ii) which is so constructed that each image forming unit is rotatively movable to a development position;

an exposure position and a development position at the time of forming respective-color toner images being the same for each color;

15 the respective-color toner images formed on the electrostatic latent image bearing member being superimposingly transferred under registration onto a recording medium via, or not via, an intermediate transfer member, and the respective-color toner images  
20 formed on the electrostatic latent image bearing member being transferred to the recording medium or the intermediate transfer member at the same transfer position;

at least one of the image forming units being a  
25 special-color image forming unit having a special-color replenishing developer cartridge containing a special-color color component replenishing developer,

and at least one of the other image forming units being  
a non-special-color image forming unit having a  
non-special-color replenishing developer cartridge  
containing a non-special-color color component  
5 replenishing developer other than the special-color  
color component replenishing developer;

the special-color image forming unit performing  
image formation by the use of a two-component developer  
containing a carrier and a toner;

10 the special-color replenishing developer cartridge  
having a volume larger than the volume of the  
non-special-color replenishing developer cartridge; and  
the special-color color component replenishing  
developer containing a toner and a carrier.

15

2. The image forming apparatus according to claim  
1, wherein the image forming units of said cyclic image  
forming unit group are disposed at a regular interval.

20 3. The image forming apparatus according to claim  
1, wherein said special-color color component  
replenishing developer is a black replenishing developer.

4. The image forming apparatus according to claim  
25 1, wherein said special-color color component  
replenishing developer contains the toner in an amount  
of from 1 part by weight to 30 parts by weight based on

1 part by weight of the carrier.

5        5. The image forming apparatus according to claim  
1, wherein said carrier has a true specific gravity of  
from 2.5 g/cm<sup>3</sup> to 4.5 g/cm<sup>3</sup>.

6. The image forming apparatus according to claim  
1, wherein said carrier is a magnetic-fine-particle-  
dispersed carrier obtained by polymerization and  
10 contains at least magnetic fine particles and a binder  
resin.

7. The image forming apparatus according to claim  
1, wherein said toner is a toner produced by subjecting  
15 a polymerizable monomer composition containing at least  
a polymerizable monomer and a colorant, to  
polymerization in an aqueous medium in the presence of a  
polymerization initiator.

20        8. A replenishing developer kit having  
replenishing developer cartridges holding therein  
replenishing developers, with respect to at least  
two-color color components;

of the replenishing developer cartridges, at least  
25 one special-color replenishing developer cartridge  
holding therein a special-color color component  
replenishing developer having a volume larger than the

volume of at least one non-special-color replenishing  
developer cartridge holding therein a non-special-color  
color component replenishing developer other than the  
special-color color component replenishing developer;  
5 and

the special-color color component replenishing  
developer containing a toner and a carrier.

9. The replenishing developer kit according to  
10 claim 8, wherein said special-color color component  
replenishing developer is a black replenishing developer.

10. The replenishing developer kit according to  
claim 8, wherein said special-color color component  
15 replenishing developer contains the carrier and the  
toner, and contains the toner in an amount of from 1  
part by weight to 30 parts by weight based on 1 part by  
weight of the carrier.

20 11. The replenishing developer kit according to  
claim 8, wherein said carrier has a true specific  
gravity of from  $2.5 \text{ g/cm}^3$  to  $4.5 \text{ g/cm}^3$ .

12. The replenishing developer kit according to  
25 claim 8, wherein said carrier is a  
magnetic-fine-particle-dispersed carrier obtained by  
polymerization and contains at least magnetic fine

particles and a binder resin.

13. The replenishing developer kit according to claim 8, wherein said toner is a toner produced by  
5   subjecting a polymerizable monomer composition containing at least a polymerizable monomer and a colorant, to polymerization in an aqueous medium in the presence of a polymerization initiator.

10       14. An image forming apparatus comprising (I) an image forming unit group having i) a plurality of movable image forming units which form respective different-color toner images on a single electrostatic latent image bearing member having a single image  
15   formation position constituted of a single exposure position and a single transfer position, the image forming units being disposed in a circular arrangement, and ii) replenishing developer cartridges, and (II) a moving means for rotatively moving the whole image  
20   forming unit group in order to move each of the image forming units to the single image formation position in order; different-color toner images being superimposingly transferred under registration onto a recording medium via, or not via, an intermediate  
25   transfer member to form a color image, wherein;

the replenishing developer kit according to any one of claims 8 to 13 is used.

15. An image forming apparatus comprising a plurality of electrostatic latent image bearing members and a plurality of image forming units corresponding respectively to the electrostatic latent image bearing  
5 members;

the image forming units each having a replenishing developer cartridge containing a replenishing developer, and a developing assembly, and forming respectively different-color toner images on the electrostatic latent  
10 image bearing members;

at least one of the image forming units being a special-color image forming unit having a special-color replenishing developer cartridge containing a special-color color component replenishing developer,  
15 and at least one of the other image forming units being a non-special-color image forming unit having a non-special-color replenishing developer cartridge containing a non-special-color color component replenishing developer other than the special-color  
20 color component replenishing developer;

the special-color image forming unit being an image performing image formation by the use of a two-component developer containing a carrier and a toner;

the special-color replenishing developer cartridge  
25 having a volume larger than the volume of the non-special-color replenishing developer cartridge; and  
the special-color color component replenishing

developer containing a toner and a carrier.

16. The image forming apparatus according to claim  
15, wherein said special-color color component  
5 replenishing developer is a black replenishing developer.

17. The image forming apparatus according to claim  
15, wherein said special-color color component  
replenishing developer contains the toner in an amount  
10 of from 1 part by weight to 30 parts by weight based on  
1 part by weight of the carrier.

18. The image forming apparatus according to claim  
15, wherein said carrier has a true specific gravity of  
15 from 2.5 g/cm<sup>3</sup> to 4.5 g/cm<sup>3</sup>.

19. The image forming apparatus according to claim  
15, wherein said carrier is a magnetic-fine-particle-  
dispersed carrier obtained by polymerization and  
20 contains at least magnetic fine particles and a binder  
resin.

20. The image forming apparatus according to claim  
15, wherein said toner is a toner produced by subjecting  
25 a polymerizable monomer composition containing at least  
a polymerizable monomer and a colorant, to  
polymerization in an aqueous medium in the presence of a

polymerization initiator.

21. An image forming apparatus comprising a single electrostatic latent image bearing member and a
- 5 plurality of image forming units which each have a replenishing developer cartridge containing a replenishing developer, and a developing assembly, and which form respective different-color toner images on the electrostatic latent image bearing member;
- 10 at least one of the image forming units being a special-color image forming unit having a special-color replenishing developer cartridge containing a special-color color component replenishing developer, and at least one of the other image forming units being
- 15 a non-special-color image forming unit having a non-special-color replenishing developer cartridge containing a non-special-color color component replenishing developer other than the special-color color component replenishing developer;
- 20 the special-color image forming unit performing image formation by the use of a two-component developer containing a carrier and a toner;
- the special-color replenishing developer cartridge having a volume larger than the volume of the
- 25 non-special-color replenishing developer cartridge; and
- the special-color color component replenishing developer containing a toner and a carrier.



22. The image forming apparatus according to claim 21, wherein said special-color color component replenishing developer is a black replenishing developer.

5        23. The image forming apparatus according to claim 21, wherein said special-color color component replenishing developer contains the toner in an amount of from 1 part by weight to 30 parts by weight based on 1 part by weight of the carrier.

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24. The image forming apparatus according to claim 21, wherein said carrier has a true specific gravity of from 2.5 g/cm<sup>3</sup> to 4.5 g/cm<sup>3</sup>.

15        25. The image forming apparatus according to claim 21, wherein said carrier is a magnetic-fine-particle-dispersed carrier obtained by polymerization and contains at least magnetic fine particles and a binder resin.

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26. The image forming apparatus according to claim 21, wherein said toner is a toner produced by subjecting a polymerizable monomer composition containing at least a polymerizable monomer and a colorant, to  
25 polymerization in an aqueous medium in the presence of a polymerization initiator.